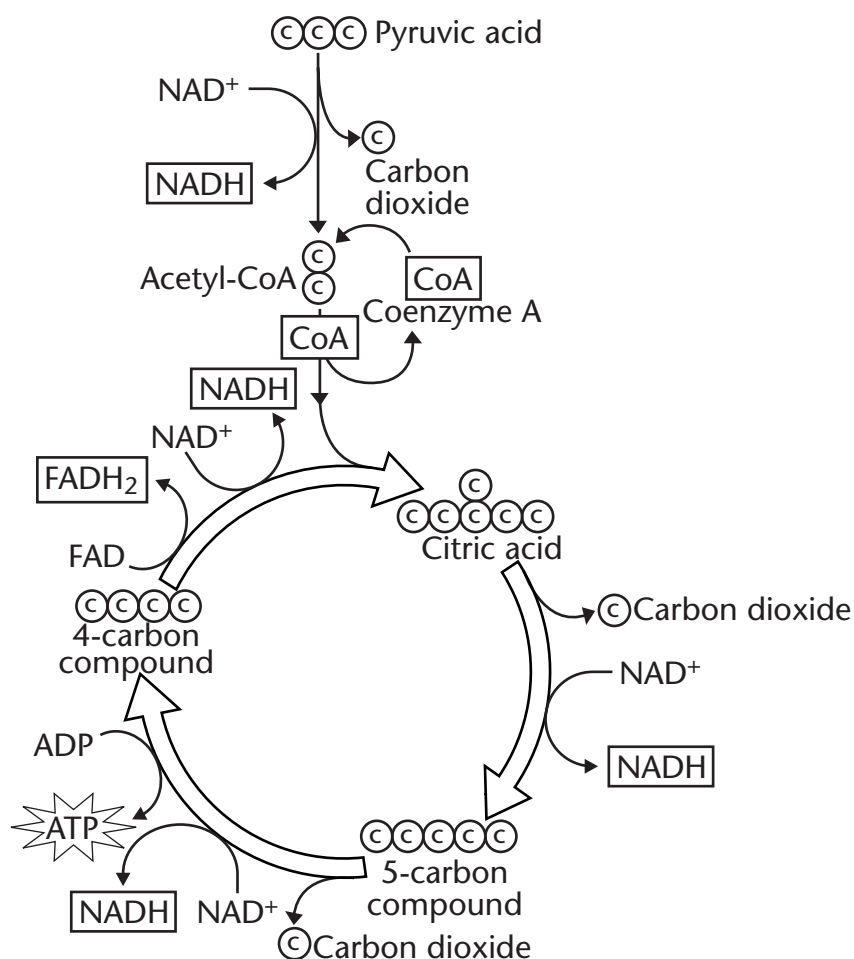


The Krebs Cycle

If oxygen is present, the pyruvic acid formed during glycolysis moves into the Krebs cycle. The Krebs cycle converts pyruvic acid into carbon dioxide. As carbon dioxide is formed, high energy electrons are accepted by NAD^+ and FAD . This results in the formation of NADH and FADH_2 . NADH and FADH_2 will be used later to produce ATP.

Follow the prompts to identify important parts of the Krebs cycle.

- Color the carbon atoms blue.
- Circle the electron carriers in green.
- Circle ATP in orange.



Use the diagram to answer the question. Circle the correct answer.

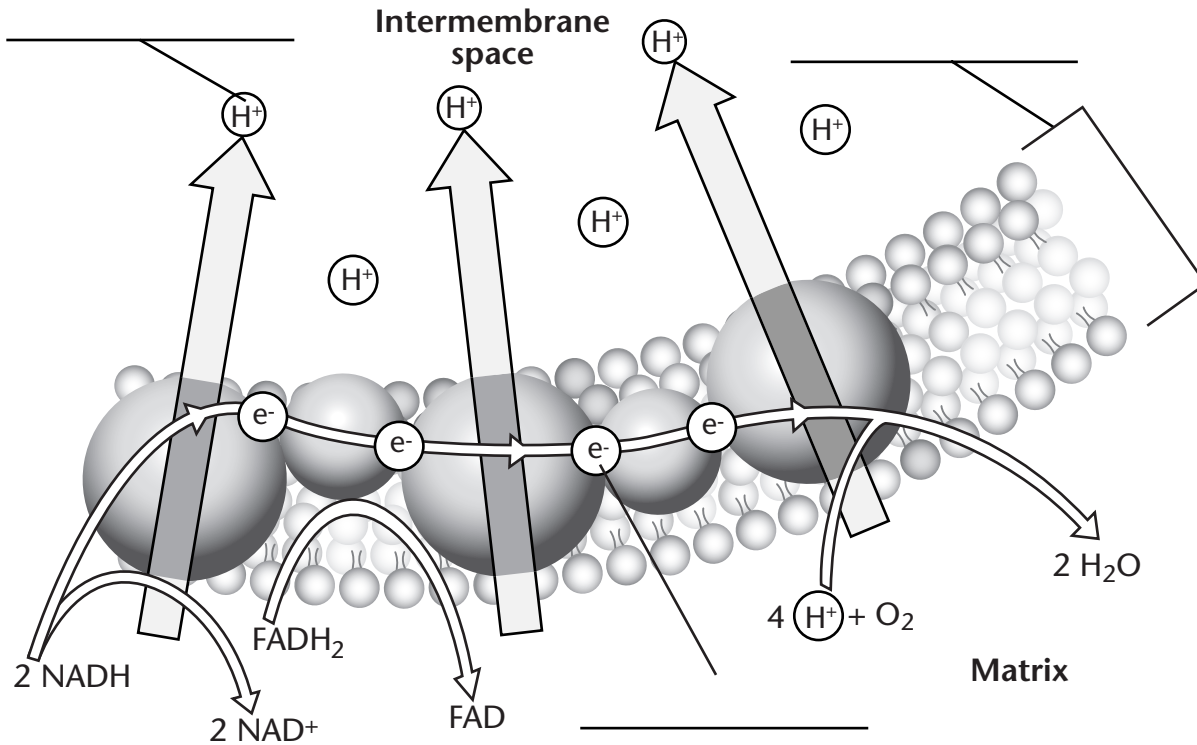
1. Which of the following is formed during the Krebs cycle?

FADH_2 pyruvic acid

Electron Transport Chain

The electron transport chain uses the high-energy electrons produced by the Krebs cycle to move hydrogen ions from one side of the inner membrane to the other.

Label the diagram with the following terms: electron, hydrogen ion, and inner membrane.



Use the diagram to answer the questions.

1. Where in the mitochondrion does the electron transport chain take place?

2. What happens to the high-energy electrons from the Krebs cycle?

Cellular Respiration and Photosynthesis

Cellular respiration and photosynthesis can be thought of as opposite processes. Energy flows in opposite directions in the two processes.

Complete the table using the words below. Some cells have been completed for you. Some words may be used more than once.

carbon dioxide	energy release	mitochondria	water
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	Photosynthesis	Cellular Respiration
Function	energy capture	
Location	chloroplasts	
Reactants		glucose; oxygen
Products	oxygen; glucose	

Use the table to answer the questions.

1. Which process releases energy for the cell? Circle the correct answer.

cellular respiration photosynthesis

2. For which reaction is $6\text{CO}_2 + 6\text{H}_2\text{O} \rightarrow \text{C}_6\text{H}_{12}\text{O}_6 + 6\text{O}_2$ the correct equation? Circle the correct answer.

cellular respiration photosynthesis

3. How do the products of photosynthesis compare to the reactants of cellular respiration?
